

33. An isolated nucleic acid molecule that encodes a plant vitamin E biosynthetic enzyme and remains hybridized with the isolated polynucleotide of Claim 26 under a wash condition of 0.1X SSC, 0.1% SDS, and 65°C.

A' could
34. ~~A cell or a virus comprising the polynucleotide of Claim 26.~~

35. The cell of Claim 34, wherein the cell is selected from the group consisting of a yeast cell, a bacterial cell, an insect cell, and a plant cell.

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36. ~~A transgenic plant comprising the polynucleotide of Claim 26.~~

37. A method for transforming a cell comprising introducing into a cell the polynucleotide of Claim 26.

38. A method for producing a transgenic plant comprising (a) transforming a plant cell with the polynucleotide of Claim 26, and (b) regenerating a plant from the transformed plant cell.

39. An isolated a plant vitamin E biosynthetic enzyme having a sequence selected from the group consisting of SEQ ID NOs: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, and 38.

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40. ~~A chimeric gene comprising the polynucleotide of Claim 26 operably linked to at least one suitable regulatory sequence.~~

41. The chimeric gene of Claim 40, wherein the chimeric gene is an expression vector.

42. A method for altering the level of plant vitamin E biosynthetic enzyme expression in a host cell, the method comprising:

- (a) Transforming a host cell with the chimeric gene of claim 40; and
- (b) Growing the transformed cell in step (a) under conditions suitable for the expression of the chimeric gene. --